U. S. F. W. S.
PERIODICAL
1960

J mau
DEB, Brody
Lib 1960

CANNED FISH & BYPRODUCTS — 1960

U. S. Department of The Interior
Fish and Wildlife Service

United States,
American Samoa,
Puerto Rico

Bureau of Commercial Fisheries
Washington 25, D. C.

LIBRARY
JUN 5 1961
FISH & WILDLIFE SERVICE

C. F. S. No. 2541

Annual Summary

VALUE OF CANNED FISH AND BYPRODUCTS 1934 - 1960

(IN THOUSAND OF DOLLARS)

YEAR	CANNED	BYPRODUCTS	TOTAL
1960	383,321	66,560	449,881
1959	348,251	82,216	430,467
1958	388,582	79,883	468,465
1957	335,829	81,381	417,210
1956	349,516	91,737	441,253
1955	303,165	83,336	386,501
1954	331,018	82,427	413,445
1953	306,874	74,372	381,246
1952	305,829	67,992	373,821
1951	301,210	69,313	370,523
1950	331,335	77,189	408,524
1949	295,504	78,472	373,976
1948	336,181	79,866	416,047
1947	310,679	80,592	391,271
1946	2 7,629	76,643	304,272
1945	152,800	58,211	211,011
1944	152,914	63,299	216,213
1943	141,189	59,136	200,325
1942	144,997	50,897	195,894
1941	138,684	56,801	195,485
1940	94,182	30,554	124,736
1939	96,627	34,039	130,666
1938	83,446	30,576	114,022
1937	105,175	36,804	141,979
1936	94,564	34,969	129,533
1935	74,999	29,520	104,519
1934	80,021	22,598	102,619

The pack of canned fishery products in the United States, American Samoa, and Puerto Rico amounted to 35 million standard cases (1,092 million pounds) valued at 383 million dollars to the packers. Compared to 1959, this was an increase of 3.2 million cases (117.2 million pounds) and 35 million dollars. Production increased in the packs of salmon, tuna, mackerel, Maine sardines, crab meat, shrimp, clam chowder, clam juice and broth, and animal food.

The production of byproducts was valued at 66.6 million dollars, the smallest return since 1945. The depressed prices of meal and oil, and the small production of fish solubles and homogenized-condensed fish caused this decrease.

CONTENTS

	PAGE
REVIEW	3
SUMMARY OF PRODUCTION, BY COMMODITIES, 1960.	5
FACTORS USED TO CONVERT STANDARD CASES TO POUNDS	6
PACK OF CANNED FISH AND SHELLFISH, ETC., 1960:	
SALMON.	7
MAINE SARDINES.	8
PACIFIC SARDINES.	8
TUNA.	9
TUNALIKE FISHES	9
ALEWIVES.	10
MACKEREL.	10
SHAD.	10
ANIMAL FOOD	10
FISH ROE AND CAVIAR	11
CRABMEAT.	11
CLAMS AND CLAM PRODUCTS	12
OYSTERS	12
SHRIMP.	13
MISCELLANEOUS FISHERY PRODUCTS.	13
PLANTS PRODUCING CANNED FISHERY PRODUCTS AND BYPRODUCTS, 1960.	14
NUMBER OF PLANTS PRODUCING FISHERY BYPRODUCTS, 1960.	15
PRODUCTION OF FISHERY BYPRODUCTS, 1960:	
MARINE-ANIMAL SCRAP AND MEAL.	16
MARINE-ANIMAL OILS.	16
FISH SOLUBLES AND HOMOGENIZED-CONDENSED FISH.	16
MENHADEN USED FOR REDUCTION, BY STATES, 1960.	17
MENHADEN PRODUCTS	17
OYSTER-SHELL PRODUCTS	17
FRESH-WATER MUSSEL-SHELL BUTTONS.	17
MARINE PEARL-SHELL BUTTONS.	17
MISCELLANEOUS BYPRODUCTS.	17
PACK OF CANNED FISHERY PRODUCTS, 1921 - 1960	18
PRODUCTION OF FISHERY BYPRODUCTS, 1921 - 1960.	20

* * * * * * * *
* * * * * * * *

SOURCE OF DATA--SINCE 1921, THE BUREAU OF COMMERCIAL FISHERIES OF THE FISH AND WILDLIFE SERVICE HAS MADE ANNUAL SURVEYS FOR STATISTICS OF THE DOMESTIC PRODUCTION OF CANNED FISHERY PRODUCTS AND BYPRODUCTS. THE DATA COLLECTED INCLUDE STATISTICS ON THE PRODUCTION AND VALUE OF EACH CANNED COMMODITY BY CAN SIZES AND TRADE CLASSIFICATIONS. THE VALUE SHOWN FOR THE PRODUCTS CONSTITUTES THE GROSS AMOUNT RECEIVED BY THE PRODUCER AT THE PRODUCTION POINT, NO DEDUCTIONS BEING MADE FOR COMMISSION OR EXPENSES.

The total pack of canned fishery products by 364 plants in the United States including American Samoa and Puerto Rico during 1960 amounted to 35 million cases (1,092 million pounds), valued at 383 million dollars. Compared with the previous year, this was an increase of over 3 million cases (117 million pounds) and 35 million dollars. There was an increase in both the pack for human consumption and for animal food. Significant gains in the pack of animal food, tuna, salmon and mackerel were primarily responsible for the overall increase in 1960. The value of three items--canned tuna, salmon and animal food--accounted for 79 percent of the total revenue received by canners of fishery products.

Primarily because of the lower prices for fish meal brought on by record production and heavy imports in 1959, the total value of byproducts produced in 1960 dropped to nearly 67 million dollars from a value of 82 million dollars during the previous year. The 1960 byproducts value was the lowest since 1945.

Tuna:--The 1960 pack of tuna amounted to 15.3 million cases, a new record. The pack was up 7 percent in volume and 8 percent in value compared with the previous year.

Salmon:--The 1960 pack of salmon amounted to 2.9 million cases valued at 84.7 million dollars. This represents an increase of 18 percent in both volume and value. The increase in the Bristol Bay run of red salmon contributed chiefly to the increase. Failure of the runs elsewhere continued to plague the industry.

Mackerel:--The prevalence of these fish along the California coast, and the scarcity of sardines caused fishermen to devote more effort to this fishery during 1960. The pack of 935 thousand cases was 59 percent greater in volume and 37 percent greater in value than in 1959.

Sardines:--The 1960 pack of Pacific sardines totaled 616 thousand cases valued at 4.7 million dollars. Compared with the previous year, this was a decline of 18 percent in volume and 14 percent in value. Scarcity of sardines and the appearance of greater quantities of mackerel resulted in fishermen devoting more time to fishing mackerel, thus reducing the sardine catch and pack.

The Maine pack of sardines of approximately 2 million cases valued at 16.7 million dollars was up 14 percent in volume and 12 percent in value over the 1959 production. Landings of Maine herring, used principally for canning sardines, increased by approximately 30 percent or 35 million pounds, while imports increased by almost 9 million pounds.

Oysters:--The 1960 oyster pack totaling nearly 411 thousand standard cases valued at 5.6 million dollars was about 11 million cases and 81 thousand dollars less than the previous year. With exception of 1958, the pack was the smallest since 1948. The 1960 production of oyster stew amounting to 122 thousand cases was 15 percent less than the previous year.

Crabs:--The pack of crab meat amounting to 205 thousand cases valued at 5.1 million dollars was the largest pack since 1948. The pack represented a 36 percent increase in volume and 45 percent increase in value over the previous year's production. The pack of both king crabs and blue crabs increased during 1960.

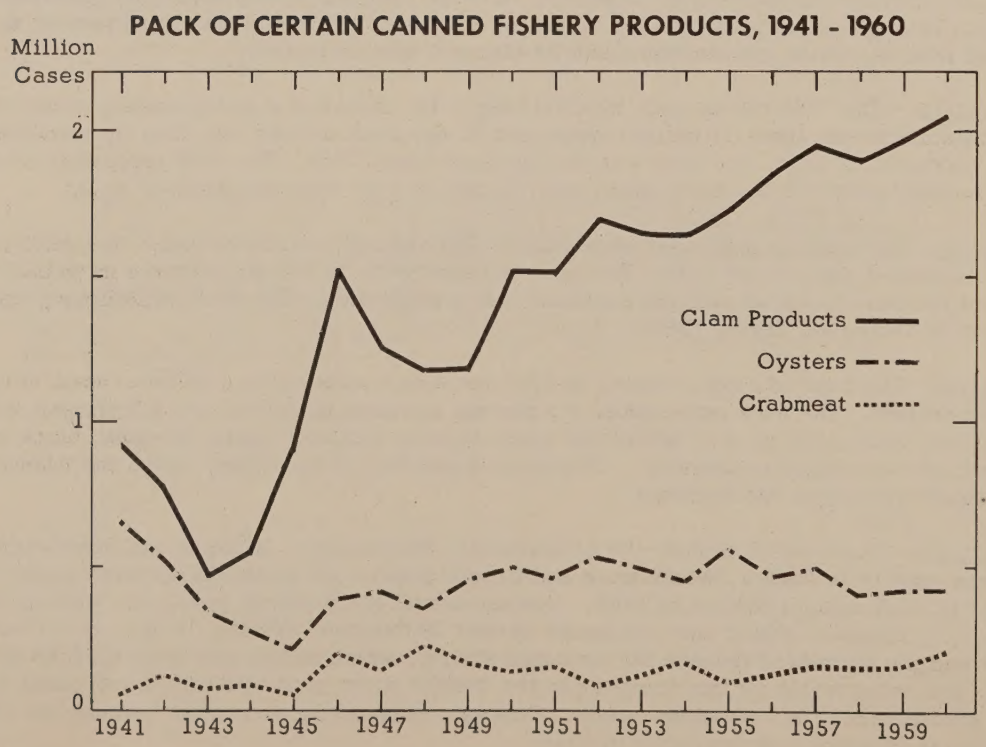
Clams:--The pack of clam products in 1960 set a new record of 2.1 million cases valued at 13.6 million dollars. The pack represented a 5 percent increase in volume and a 3 percent increase in value over 1959. The pack of whole and minced clams declined, while chowder, juice and broth production increased considerably. Continued expansion of the fishery along the Atlantic seaboard contributed chiefly to the increase.

Shrimp:--A total of 45 plants--33 in Louisiana, Mississippi, Alabama and Texas; one in Georgia; and 11 in Alaska, Washington and Oregon packed 931 thousand standard cases of shrimp valued at 16.9 million dollars in 1960. Compared with the previous year, this was an increase of nearly 9 thousand cases but a decrease of over 28 thousand dollars. A drop in the market value and the decreased demand for the small shrimp, which makes up the bulk of the West Coast pack, was responsible for the decrease in the Pacific coast pack to 59 thousand cases from the 1959 record year of 169 thousand cases. Canned shrimp production in the eastern and southern States was 16 percent greater than in 1959.

Animal Food:--A record pack totaling nearly 9 million standard cases valued at 44 million dollars was produced in 1960--over one million cases and two million dollars greater than the previous record year of 1958. Only canned animal food processed with 10 pounds or more of raw fishery products per standard case (48 one-pound cans) are considered in these data. Over 95 percent of the pack was produced in four states--Mississippi, California, Massachusetts and Maine. Whole fish in the amount of 116 million pounds, and waste fish 95 million pounds were used in the production of canned animal food.

Byproducts:--Fish meal production in 1960 totaled nearly 290 thousand tons, 17 thousand tons less than the record year of 1959, and 6 thousand tons less than the previous high in 1956. Because of the depressed market for fish meal in 1960 the price per ton was the lowest since 1945. Nearly 28 million gallons of fish and marine animal oil were produced in 1960, 2.9 million gallons more than the previous year and the highest annual production since 1944. The average value of the oil was nearly 8 percent less than during 1959. Fish solubles and homogenized-condensed fish production in 1960 totaled 99 thousand tons, 66 thousand tons less than in 1959.

Products from oyster shells, and buttons from fresh water and marine mollusk shells produced in 1960 were valued at 10 million dollars. Other byproducts including agar agar, glue, Irish moss extract, kelp products, liquid fertilizer, mollusk shell lime, etc., and pearl essence were valued at 13.8 million dollars.



SUMMARY OF PRODUCTION, BY COMMODITIES, 1960

PRODUCT	NUMBER OF PLANTS	STANDARD CASES	POUNDS PER CASE	POUNDS	VALUE
CANNED PRODUCTS:					
FOR HUMAN CONSUMPTION:					
SALMON	111	2,912,016	48	139,776,768	$84,717,323
SARDINES:					
MAINE	32	1,997,618	23.4	46,744,261	16,699,987
PACIFIC	15	615,865	45	27,713,925	4,658,747
TUNA:					
SOLID	35	3,557,512	21	74,707,752	49,007,311
CHUNKS	28	10,145,188	19.5	197,831,166	112,628,513
FLAKES AND GRATED	27	1,602,734	18	28,849,212	11,043,049
TOTAL	1/37	15,305,434	-	301,388,130	172,678,873
TUNALIKE FISHES	7	14,423	21-19.5-18	137,909	106,859
ALEWIVES	8	41,891	45	1,885,095	194,524
MACKEREL	15	934,746	45	42,063,570	5,803,965
SHAD	7	3,418	45	153,810	37,462
FISH CAKES (PRINCIPALLY GROUNDFISH)	4	77,930	48	3,740,640	1,068,631
FISH FLAKES (GROUNDFISH), PASTE AND SPREAD	8	15,877	48	762,096	442,858
GEFILTEFISH	5	234,937	48	11,276,976	4,396,000
FISH, SMOKED AND KIPPERED (SALMON, STURGEON, SHAD, AND SABLEFISH)	15	1,249	48	59,952	89,133
TUNA SPECIALTIES (WITH NOODLES, SHERRY, BEANS, AND CREAMED SAUCE); AND SMOKED TUNA	6	60,621	48	2,909,808	456,508
MISCELLANEOUS FISH SPECIALTIES	14	75,510	48	3,624,480	877,938
FISH ROE AND CAVIAR	24	50,975	48	2,446,800	1,838,589
CRABMEAT, NATURAL	42	204,651	19.5	3,990,695	5,144,785
CRABMEAT SPECIALTIES (COCKTAIL, DEVILED, SOFT SHELL, SPREAD, SMOKED, SOUP, AND NEWBURG)	7	8,078	48	387,744	116,277
LOBSTER SPECIALTIES (MEAT, SPREAD, DIP, THERMIDOR, SOUP, AND STEWS)	7	7,516	48	360,768	236,243
SHRIMP, NATURAL	45	930,974	15	2/13,964,610	16,920,224
SHRIMP SPECIALTIES (COCKTAIL, SOUPS, AND STEWS)	7	4,178	48	200,544	61,339
CLAMS AND PRODUCTS:					
WHOLE	12	26,745	15	3/401,175	286,706
MINCED	18	714,501	15	3/10,717,515	4,787,809
CHOWDER	14	1,253,129	30	3/37,593,870	8,145,155
JUICE	10	63,096	30	3/1,892,880	422,204
TOTAL	1/36	2,057,471	-	50,605,440	13,641,874
CLAM SPECIALTIES (DIP, FRITTERS, SPREAD, SAUCES, SOUPS, AND STEWS)	10	36,598	48	1,756,704	507,765
CONCH MEAT AND CHOWDER	4	6,042	48	290,016	130,270
OYSTERS, NATURAL	31	410,521	14	2/5,747,294	5,640,280
OYSTER SPECIALTIES (SMOKED, STEW, BISQUE, AND SOUP)	16	125,748	48	6,035,904	1,675,036
SQUID	3	15,637	48	750,576	73,638
TERRAPIN AND TURTLE (MEAT, SOUP, AND STEW)	6	13,455	48	645,840	237,526
MISCELLANEOUS SHELLFISH SPECIALTIES	6	1,676	48	80,448	38,845
TOTAL FOR HUMAN CONSUMPTION	1/327	26,165,055	-	669,500,803	338,491,499
BAIT AND ANIMAL FOOD:					
ANIMAL FOOD	51	8,783,271	48	421,597,008	43,961,003
SALMON EGGS FOR BAIT	8	14,948	48	717,504	868,688
TOTAL BAIT AND ANIMAL FOOD	59	8,798,219	-	422,314,512	44,829,691
GRAND TOTAL, CANNED	1/364	34,963,274	-	1,091,815,315	383,321,190
		UNIT		QUANTITY	VALUE
BYPRODUCTS:					
MARINE ANIMAL SCRAP AND MEAL	109	TONS		289,716	$25,331,400
MARINE ANIMAL OILS:					
BODY OIL	74	GALLONS		27,826,191	12,985,981
LIVER OIL	4	DO		32,707	349,813
MARINE PEARL-SHELL BUTTONS	14	GROSS		1,426,369	2,675,928
MUSSEL-SHELL BUTTONS	8	DO		523,091	577,221
OYSTER-SHELL PRODUCTS	17	TONS		469,737	6,810,823
FISH SOLUBLES AND HOMOGENIZED-CONDENSED FISH	42	TONS		98,929	4,020,992
MISCELLANEOUS BYPRODUCTS	17	-		-	13,807,292
TOTAL BYPRODUCTS	1/177	-		-	66,559,450
GRAND TOTAL	1/500	-		-	449,880,640

1/ EXCLUSIVE OF DUPLICATION. 2/ DRAINED WEIGHT. 3/ "CUT OUT" OR "DRAINED" WEIGHTS OF CAN CONTENTS ARE GIVEN FOR WHOLE OR MINCED CLAMS, AND NET CAN CONTENTS FOR OTHER CLAM PRODUCTS.

NOTE:--LISTS OF CANNERS AND MANUFACTURERS OF FISHERY BYPRODUCTS BY INDIVIDUAL COMMODITIES MAY BE OBTAINED FROM THE FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C.

SUMMARY OF PRODUCTION, 1960

STATE	CANNED		BYPRODUCTS	TOTAL
	POUNDS	VALUE	VALUE	VALUE
MAINE	121,221,358	$27,882,996	$4,220,516	$32,103,512
MASSACHUSETTS, RHODE ISLAND, CONNECTICUT	69,259,944	6,666,217	4,534,472	11,200,689
NEW YORK	6,483,645	2,946,087	1,897,421	4,843,508
NEW JERSEY	37,766,010	11,497,700	6,153,451	17,651,151
PENNSYLVANIA, DELAWARE	10,520,016	2,231,059	4,782,343	7,013,402
MARYLAND, AMERICAN SAMOA, HAWAII, PUERTO RICO	63,753,679	36,932,957	2,085,014	39,017,971
VIRGINIA	5,723,529	644,216	3,584,114	4,228,330
NORTH CAROLINA, SOUTH CAROLINA	2,150,887	1,736,234	3,474,572	5,210,806
GEORGIA, FLORIDA, ALABAMA	571,018	641,305	3,920,944	4,562,249
MISSISSIPPI	145,468,909	20,453,558	3,698,536	24,152,094
LOUISIANA, TEXAS	12,980,504	13,370,641	12,801,719	26,172,360
ILLINOIS, IOWA, MISSOURI, MICHIGAN, OHIO, WISCONSIN	2,624,880	463,331	630,980	1,094,311
ALASKA	130,224,000	77,159,090	1,266,968	78,426,058
WASHINGTON	28,942,854	17,138,743	154,719	17,293,462
OREGON	29,533,934	18,723,750	429,546	19,153,296
CALIFORNIA	424,590,148	144,833,306	12,924,135	157,757,441
TOTAL	1,091,815,315	383,321,190	66,559,450	449,880,640

FACTORS USED TO CONVERT STANDARD CASES TO POUNDS

PRODUCTS	PRIOR TO 1938	1939 AND 1940	1941	1942	1943
	POUNDS PER CASE	POUNDS PER CASE	POUNDS PER CASE	POUNDS PER CASE	POUNDS PER CASE
SARDINES:					
MAINE	25	25	25	25.3	20.3
PACIFIC	48	48	48	45	45
TUNA AND TUNALIKE FISHES:					
SOLID	24	24	21	22.5	22.5
CHUNKS	-	-	-	-	-
FLAKES	24	24	21	18	18
MACKEREL	48	48	48	45	45
ALEWIVES	48	48	48	48	45
ANCHOVIES	48	48	48	48	48
SHAD	48	48	48	48	48
FISH FLAKES	48	48	48	48	48
OYSTERS	15	15	15	15	22.5
SHRIMP:					
WET PACK	17.25	17.25	17.25	21	21
DRY PACK	15	15	15	19.5	19.5
CLAM PRODUCTS:					
WHOLE AND MINCED	15	15	15	15	15
JUICE, CHOWDER, BROTH, ETC.	30	30	30	30	30
CRABS	48	39	39	39	39
ALL OTHERS	48	48	48	48	48

PRODUCTS	1944 TO 1947	1948 TO 1951	1952	1953 TO 1957	1958 TO 1960
	POUNDS PER CASE	POUNDS PER CASE	POUNDS PER CASE	POUNDS PER CASE	POUNDS PER CASE
SARDINES:					
MAINE	20.3	20.3	20.3	20.3	23.4
PACIFIC	45	45	45	45	45
TUNA AND TUNALIKE FISHES:					
SOLID	21	21	21	21	21
CHUNKS	(1)	(1)	19.5	19.5	19.5
FLAKES	18	18	18	18	18
MACKEREL	45	45	45	45	45
ALEWIVES	45	45	45	45	45
ANCHOVIES	48	48	48	31.25	31.25
SHAD	45	45	45	45	45
FISH FLAKES	42	42	42	48	48
OYSTERS	22.5	14	14	14	14
SHRIMP:					
WET PACK	21	15	15	15	15
DRY PACK	-	-	15	15	15
CLAM PRODUCTS:					
WHOLE AND MINCED	15	15	15	15	15
JUICE, CHOWDER, BROTH, ETC.	30	30	30	30	30
CRABS	39	19.5	19.5	19.5	19.5
ALL OTHER	48	48	48	48	48

1/ PRIOR TO 1952 CHUNK PACK TUNA WAS INCLUDED WITH THE FLAKE PACK.

NOTE:--THE FACTORS LISTED ABOVE WERE USED IN CONVERTING THE STANDARD CASES REPORTED IN THE CANNED FISHERY PRODUCTS BULLETINS FOR THE YEARS INDICATED.

PACK OF SALMON, BY STATES, 1960

(STANDARD CASES)

SPECIES AND CAN SIZE	ALASKA		WASHINGTON		OREGON AND CALIFORNIA		TOTAL	
	CASES	VALUE	CASES	VALUE	CASES	VALUE	CASES	VALUE
CHINOOK OR KING:								
1-POUND TALL	(1)	(1)	1,031	$25,994	357	$18,569	(1)	(1)
1/2-POUND FLAT	(1)	(1)	7,892	304,223	2/36,531	1,642,644	(1)	(1)
1/4-POUND FLAT	(1)	(1)	780	42,658	6,528	389,748	(1)	(1)
4-POUND TALL	(1)	(1)	107	2,782	-	-	(1)	(1)
TOTAL 3/	46,870	$1,406,100	9,810	375,657	43,416	2,050,961	100,096	$3,832,718
CHUM OR KETA:								
1-POUND TALL	(1)	(1)	32,453	730,738	933	21,459	(1)	(1)
1/2-POUND FLAT	(1)	(1)	9,811	232,815	190	4,572	(1)	(1)
1/4-POUND FLAT	(1)	(1)	27	830	-	-	(1)	(1)
4-POUND TALL	(1)	(1)	8,039	197,707	-	-	(1)	(1)
TOTAL	626,971	12,852,905	50,330	1,162,090	1,123	26,031	678,424	14,041,026
PINK:								
1-POUND TALL	(1)	(1)	29	799	-	-	(1)	(1)
1/2-POUND FLAT	(1)	(1)	1,779	53,274	-	-	(1)	(1)
1/4-POUND FLAT	(1)	(1)	22	900	-	-	(1)	(1)
4-POUND TALL	(1)	(1)	1,946	51,858	-	-	(1)	(1)
TOTAL	731,000	16,813,000	3,776	106,831	-	-	734,776	16,919,831
RED OR SOCKEYE:								
1-POUND TALL	(1)	(1)	-	-	-	-	(1)	(1)
1/2-POUND FLAT	(1)	(1)	63,162	3,091,203	1,558	81,231	(1)	(1)
1/4-POUND FLAT	(1)	(1)	61,524	3,420,937	5,677	344,766	(1)	(1)
4-POUND TALL	(1)	(1)	65	2,374	-	-	(1)	(1)
TOTAL	1,166,000	39,644,000	124,751	6,514,514	7,235	425,997	1,297,986	46,584,511
SILVER OR COHO:								
1-POUND TALL	(1)	(1)	141	4,225	19	684	(1)	(1)
1/2-POUND FLAT	(1)	(1)	6,305	217,973	534	20,190	(1)	(1)
1/4-POUND FLAT	(1)	(1)	5,535	286,908	3,298	167,755	(1)	(1)
4-POUND TALL	(1)	(1)	750	26,859	-	-	(1)	(1)
TOTAL	77,978	2,339,340	12,731	535,965	3,851	188,629	94,560	3,063,934
STEELHEAD:								
1/2-POUND FLAT	-	-	-	-	1,366	54,640	1,366	54,640
1/4-POUND FLAT	-	-	-	-	4,808	220,663	4,808	220,663
TOTAL	-	-	-	-	6,174	275,303	6,174	275,303
GRAND TOTAL	2,648,819	73,055,345	201,398	8,695,057	61,799	2,966,921	2,912,016	84,717,323

1/ NOT AVAILABLE.

2/ INCLUDES A SMALL PACK PRODUCED IN CALIFORNIA.

3/ INCLUDES A SMALL QUANTITY PACKED IN OVAL CANS.

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT 1-POUND CANS, EACH CONTAINING 16 OUNCES. SALMON WERE CANNED IN 25 PLANTS IN WASHINGTON, 10 IN OREGON, 1 IN CALIFORNIA, AND 75 IN ALASKA. THE PACK OF SMOKED SALMON IS INCLUDED IN THE TABLE OF MISCELLANEOUS CANNED PRODUCTS.

WASHINGTON AND OREGON SALMON PACK, BY DISTRICTS, 1960

(STANDARD CASES)

SPECIES	PUGET SOUND		COLUMBIA RIVER		COASTAL		TOTAL	
	CASES	VALUE	CASES	VALUE	CASES	VALUE	CASES	VALUE
CHINOOK OR KING. . .	2,535	$84,101	50,285	$2,328,334	1/406	$14,183	53,226	$2,426,618
CHUM OR KETA	48,003	1,109,717	2,459	56,166	991	22,238	51,453	1,188,121
PINK	3,776	106,831	-	-	-	-	3,776	106,831
RED OR SOCKEYE . . .	122,317	6,394,924	8,650	496,451	1,019	49,136	131,986	6,940,511
SILVER OR COHO . . .	11,286	476,776	5,202	244,344	94	3,474	16,582	724,594
STEELHEAD.	-	-	6,174	275,303	-	-	6,174	275,303
TOTAL	187,917	8,172,349	72,770	3,400,598	2,510	89,031	263,197	11,661,978

1/ INCLUDES A SMALL QUANTITY PRODUCED IN CALIFORNIA.

PUGET SOUND SALMON PACK, BY ORIGIN OF FISH, 1960

SPECIES	PUGET SOUND FISH	CANADIAN FISH	ALASKAN FISH	TOTAL FISH
	CASES	CASES	CASES	CASES
CHINOOK OR KING.	1,942	486	107	2,535
CHUM OR KETA	7,121	37,246	3,636	48,003
PINK	1/618	-	3,158	3,776
RED OR SOCKEYE	95,884	-	26,433	122,317
SILVER OR COHO	1/6,218	404	4,664	11,286
TOTAL	111,783	38,136	37,998	187,917

1/ A SMALL QUANTITY OF CALIFORNIA FISH IS INCLUDED WITH THE PUGET SOUND FISH.

PACK OF MAINE SARDINES, 1960

STYLE OF PACK	STANDARD CASES	VALUE	CAN CONTENTS AND CASE SIZE	ACTUAL CASES	VALUE
SOYBEAN OIL.	1,701,760	$14,298,773	3-3/4 OUNCES NET (100 CANS). .	1,933,086	$16,330,761
MUSTARD SAUCE.	240,360	1,965,188	12 OUNCES NET (48 CANS). . . .	12,843	118,803
TOMATO SAUCE	33,054	198,875	15 OUNCES NET (48 CANS). . . .	13,832	99,852
OLIVE OIL.	10,613	111,466	OTHER SIZES (CONVERTED TO		
CHILE PEPPERS.	7,048	70,480	3-3/4 OUNCES NET - 100 CANS).	19,207	150,571
OTHER 1/	4,783	55,205			
TOTAL	1,997,618	16,699,987	TOTAL	1,978,468	16,699,987

1/ INCLUDES SARDINES IN CHILE SAUCE, COCKTAIL SAUCE, PEANUT OIL, AND SMOKED IN SOY OIL.

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE UNIFORM BASIS OF ONE HUNDRED 1/4 OIL CANS (3-3/4 OUNCES NET) TO THE CASE. SARDINES WERE CANNED IN 32 PLANTS IN MAINE.

PACK OF PACIFIC SARDINES, 1960

STYLE OF PACK	STANDARD CASES	VALUE	CAN CONTENTS AND CASE SIZE	ACTUAL CASES	VALUE
NATURAL.	168,401	$991,151	1 POUND CAN:		
IN TOMATO SAUCE. . . .	385,861	3,150,485	15 OUNCES NET, OVAL (48 CANS)	357,461	$2,763,549
IN MUSTARD SAUCE . . .	41,443	328,860	15 OUNCES NET, TALL (48 CANS)	178,784	1,053,830
OTHER (IN TOMATO AND			8 OUNCES NET (48 CANS). . . .	39,123	270,418
OLIVE OIL, SPICED,			OTHER SIZES (CONVERTED TO		
AND NATURAL FILLETS).	20,160	188,251	STANDARD CASES).	58,755	570,950
TOTAL	615,865	4,658,747	TOTAL.	634,123	4,658,747

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE UNIFORM BASIS OF FORTY-EIGHT 1-POUND CANS (15 OUNCES NET). SARDINES WERE CANNED IN 15 PLANTS IN CALIFORNIA.

PACK OF TUNA, 1960

(STANDARD CASES)

SPECIES	CALIFORNIA		WASHINGTON AND OREGON		ATLANTIC AND GULF COASTS, HAWAII AND U. S. TERRITORIES		TOTAL	
	CASES	VALUE	CASES	VALUE	CASES	VALUE	CASES	VALUE
ALBACORE:								
SOLID PACK. . . .	1,169,603	$15,084,502	780,336	$11,525,321	621,420	$9,192,342	2,571,359	$35,802,165
CHUNKS.	540,607	6,591,866	80,397	1,010,933	389,768	4,772,085	1,010,772	12,374,884
FLAKES AND GRATED	222,673	1,564,163	139,950	915,565	131,709	943,860	494,332	3,423,588
TOTAL.	1,932,883	23,240,531	1,000,683	13,451,819	1,142,897	14,908,287	4,076,463	51,600,637
LIGHT MEAT:								
SOLID PACK. . . .	725,099	9,692,039	11,373	136,650	85,032	1,114,280	821,504	10,942,969
CHUNKS.	7,036,146	77,045,320	435,173	4,250,819	1,663,097	18,957,490	9,134,416	100,253,629
FLAKES AND GRATED	857,349	5,986,217	26,311	184,177	224,742	1,449,067	1,108,402	7,619,461
TOTAL.	8,618,594	92,723,576	472,857	4,571,646	1,972,871	21,520,837	11,064,322	118,816,059
UNCLASSIFIED, TONNO, SOLID PACK.	163,434	2,244,428	-	-	1,215	17,749	164,649	2,262,177
GRAND TOTAL. .	10,714,911	118,208,535	1,473,540	18,023,465	3,116,983	36,446,873	15,305,434	172,678,873

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT NO. 1/2 TUNA CANS TO THE CASE, EACH CONTAINING 7 OUNCES NET WEIGHT OF SOLID PACK, 6-1/2 OUNCES NET WEIGHT OF CHUNKS, OR 6 OUNCES NET WEIGHT OF FLAKES OR GRATED. DIETETIC AND BABY FOOD TUNA PACKS ARE INCLUDED IN THESE TOTALS. TUNA WERE CANNED IN 14 PLANTS IN CALIFORNIA, 9 PLANTS IN OREGON, 7 PLANTS IN WASHINGTON, 2 PLANTS IN PUERTO RICO, AND 1 PLANT EACH IN MAINE, PENNSYLVANIA, MARYLAND, AMERICAN SAMOA, AND HAWAII. DATA ON THE PACK OF TUNA AND NOODLES AND OTHER TUNA SPECIALTIES CAN BE FOUND IN THE TABLE OF MISCELLANEOUS CANNED FISHERY PRODUCTS.

PACK OF TUNA, BY CAN SIZES, 1960

CAN AND SIZE CASE	ACTUAL CASES	VALUE
4-POUND. . . . . (12 CANS)	41,536	$973,258
1-POUND. . . . . (48 CANS)	173,322	3,838,529
1/2-POUND. . . . . (48 CANS)	13,267,326	148,269,175
1/4-POUND. . . . . (48 CANS)	1,027,909	8,268,520
9-1/2 OUNCES. . . . . (24 CANS)	846,115	7,073,534
OTHER SIZES (CONVERTED TO STANDARD CASES).	492,429	4,255,857
TOTAL	15,848,637	172,678,873

PACK OF TUNALIKE FISHES, 1960

SPECIES	STANDARD CASES	VALUE
BONITO AND YELLOWTAIL:		
SOLID PACK AND FLAKES.	6,573	$45,773
CHUNKS	7,850	61,086
TOTAL	14,423	106,859

NOTE:--"STANDARD CASES" REPRESENT THE EQUIVALENT OF FORTY-EIGHT NO. 1/2 TUNA CANS TO THE CASE, EACH CONTAINING 7 OUNCES NET WEIGHT OF SOLID PACK, 6 TO 6-1/2 OUNCES NET WEIGHT OF CHUNKS, OR 6 OUNCES NET WEIGHT OF FLAKES OR GRATED. TUNALIKE FISHES WERE CANNED IN 7 PLANTS IN CALIFORNIA.

PACK OF ALEWIVES, 1960

STATE AND NUMBER OF PLANTS	STANDARD CASES	VALUE
MARYLAND (1), VIRGINIA (6), NORTH CAROLINA (1), TOTAL (8)	1/41,891	$194,524

1/ INCLUDES A SMALL PACK OF ALEWIVES WITH ROE.

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS OF 15 OUNCES EACH. PRACTICALLY THE ENTIRE PACK WAS CANNED IN 15 OUNCE CANS.

PACK OF MACKEREL, 1960

ITEM	STANDARD CASES	VALUE
JACK MACKEREL:		
NATURAL	592,553	$3,573,091
IN TOMATO SAUCE	30,159	250,246
TOTAL	622,712	3,823,337
PACIFIC MACKEREL:		
NATURAL	298,665	1,858,858
IN TOMATOE SAUCE	13,369	121,770
TOTAL	312,034	1,980,628
GRAND TOTAL	934,746	5,803,965

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS OF 15 OUNCES EACH. MOST OF THE PACK WAS CANNED IN 15 OUNCE CANS. MACKEREL WERE CANNED IN 15 PLANTS IN CALIFORNIA.

PACK OF SHAD, 1960

STATE AND NUMBER OF PLANTS	STANDARD CASES	VALUE
MARYLAND (1), NORTH CAROLINA (1), WASHINGTON (1), OREGON (4), TOTAL (7)	3,418	$37,462

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS OF 15 OUNCES EACH.

PACK OF ANIMAL FOOD FROM FISHERY PRODUCTS, 1960

STATE AND NUMBER OF PLANTS	STANDARD CASES	VALUE	CAN AND CASE SIZE	ACTUAL CASES	VALUE
MAINE (2), MASSACHUSETTS (5)	2,524,936	$11,981,608	6-1/2 OUNCES NET (48 CANS)	107,139	$386,326
NEW YORK (1), NEW JERSEY (1), PENNSYLVANIA (3)	99,906	338,221	8 OUNCES NET (48 CANS)	4,532,963	16,454,878
MARYLAND (1), VIRGINIA (1), NORTH CAROLINA (1)	86,334	427,237	16 OUNCES NET (48 CANS)	6,293,556	26,222,439
MISSISSIPPI (5)	2,933,772	14,425,922	OTHER SIZES CONVERTED TO		
TEXAS (1), ILLINOIS (1), MICHIGAN (1)	67,748	335,927	STANDARD CASES (16 OUNCES		
WASHINGTON (2), OREGON (4)	134,343	783,814	NET-48 CANS)	179,709	897,360
CALIFORNIA (20), AMERICAN SAMOA (1), PUERTO RICO (1)	2,936,232	15,668,274			
TOTAL (51)	8,783,271	43,961,003	TOTAL	11,113,367	43,961,003

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS, EACH CONTAINING 16 OUNCES.

PACK OF FISH ROE AND CAVIAR, 1960

PRODUCT AND NUMBER OF PLANTS	STANDARD CASES	VALUE	STATES OF PRODUCTION AND NUMBER OF PLANTS
ALEWIFE ROE (14)	33,427	$426,036	MARYLAND (1), VIRGINIA (9), AND NORTH CAROLINA (4)
SHAD ROE (6)	678	74,924	MARYLAND (1), WASHINGTON (1), OREGON (4)
SALMON CAVIAR (3)	5,032	314,558	NEW YORK (3)
WHITEFISH (4), LUMPFISH (1), AND STURGEON CAVIAR (1); GROUNDFISH ROE (1)	11,838	1,023,071	MASSACHUSETTS (1), NEW YORK (3), WISCONSIN (1)
TOTAL EDIBLE ROE AND CAVIAR (24)	50,975	1,838,589	
SALMON EGGS FOR BAIT (8)	14,948	868,688	WASHINGTON (8)
GRAND TOTAL (32)	65,923	2,707,277	

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF 48 CANS, EACH CONTAINING 16 OUNCES.

PACK OF FISH ROE AND CAVIAR, BY STATES, 1960

STATE AND NUMBER OF PLANTS	STANDARD CASES	VALUE
MASSACHUSETTS (1), NEW YORK (3)	15,825	$1,275,908
MARYLAND (1), VIRGINIA (9)	22,272	286,294
NORTH CAROLINA (4)	11,217	146,640
WASHINGTON (9)	14,988	872,954
OREGON (4), WISCONSIN (1)	1,621	125,481
TOTAL (32)	65,923	2,707,277

PACK OF CRABMEAT, 1960

STATE AND NUMBER OF PLANTS	SPECIES	STANDARD CASES	VALUE
ATLANTIC AND GULF STATES: MAINE (1), NORTH CAROLINA (1), SOUTH CAROLINA (1), ALABAMA (1), MISSISSIPPI (4), AND LOUISIANA (2), TOTAL (10)	BLUE	1/54,242	$1,125,977
PACIFIC STATES:			
WASHINGTON (10)	DUNGENESS	28,154	654,033
OREGON (3) AND CALIFORNIA (1)	DUNGENESS	6,255	164,775
ALASKA (10)	DUNGENESS	16,000	400,000
ALASKA (8)	KING	100,000	2,800,000
TOTAL (32)		150,409	4,018,808
GRAND TOTAL (42)		204,651	5,144,785

CAN CONTENTS AND CASE SIZE	ACTUAL CASES	VALUE
6-1/2 OUNCES NET (24 CANS)	167,027	$1,822,678
OTHER SIZES (INCLUDING ALASKA PACK) CONVERTED TO STANDARD CASES	121,139	3,322,107
TOTAL	288,166	5,144,785

1/ INCLUDES A SMALL QUANTITY OF ROCK CRABS PACKED IN MAINE.

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS TO THE CASE, EACH CONTAINING 6-1/2 OUNCES.

PACK OF CLAMS AND CLAM PRODUCTS, 1960

(STANDARD CASES)

SPECIES	WHOLE AND MINCED		CHOWDER AND JUICE		TOTAL	
	CASES	VALUE	CASES	VALUE	CASES	VALUE
CLAMS:						
HARD, SOFT AND SURF	717,907	$4,640,237	1,316,225	$8,567,359	2,034,132	$13,207,596
RAZOR	23,339	434,278	-	-	23,339	434,278
TOTAL.	741,246	5,074,515	1,316,225	8,567,359	2,057,471	13,641,874

NOTE:--CLAMS WERE CANNED IN 8 PLANTS IN WASHINGTON, 6 PLANTS IN MAINE, 5 PLANTS IN NEW JERSEY, 4 PLANTS IN ALASKA, 3 PLANTS EACH IN NEW YORK AND OREGON, 2 PLANTS IN PENNSYLVANIA, 1 PLANT EACH IN MASSACHUSETTS, CONNECTICUT, RHODE ISLAND, DELAWARE AND CALIFORNIA. "STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF 48 NO. 1 PICNIC CANS, EACH CAN OF WHOLE OR MINCED CLAMS CONTAINING 5 OUNCES OF MEAT, DRAINED WEIGHT; AND EACH CAN OF CHOWDER, JUICE, BROTH, BOUILLON, OR NECTAR, 10 OUNCES NET CONTENT. THE PACK OF CLAMS CANNED IN THE SHELL IS NOT INCLUDED IN THIS TABLE.

CLAM PRODUCTION, BY TYPE OF PACK, 1960

PRODUCT AND NUMBER OF PLANTS	STANDARD CASES	POUNDS	VALUE
WHOLE CLAMS (12).	26,745	401,175	$286,706
MINCED CLAMS (18)	714,501	10,717,515	4,787,809
CHOWDER (14).	1,253,129	37,593,870	8,145,155
CLAM JUICE (10)	63,096	1,892,880	422,204
TOTAL 1/ (36).	2,057,471	50,605,440	13,641,874

1/ EXCLUSIVE OF DUPLICATION.

PACK OF OYSTERS, 1960

STATE AND NUMBER OF PLANTS	STANDARD CASES	VALUE
ATLANTIC AND GULF STATES:		
NEW JERSEY (1), SOUTH CAROLINA (2), AND GEORGIA (1).	59,450	$895,736
MISSISSIPPI (9), ALABAMA (2)	66,762	1,018,774
LOUISIANA (11).	186,693	2,436,811
TOTAL.	312,905	4,351,321
PACIFIC STATES:		
WASHINGTON (4), OREGON (1).	97,616	1,288,959
GRAND TOTAL (31)	410,521	5,640,280

CAN CONTENTS AND CASE SIZE	ACTUAL CASES	VALUE
ATLANTIC AND GULF STATES:		
4-2/3 OUNCES (24 CANS). . . .	524,218	$3,590,811
6-1/2 OUNCES (24 CANS). . . .	59,301	614,855
OTHER SIZES CONVERTED TO STANDARD CASES	9,498	145,655
TOTAL.	593,017	4,351,321
PACIFIC STATES:		
4-2/3 OUNCES (24 CANS). . . .	65,857	473,403
6-1/2 OUNCES (24 CANS). . . .	88,422	780,499
OTHER SIZES CONVERTED TO STANDARD CASES	3,108	35,057
TOTAL.	157,387	1,288,959
GRAND TOTAL.	750,404	5,640,280

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS TO THE CASE, EACH CAN CONTAINING 4-2/3 OUNCES DRAINED WEIGHT.

PACK OF SHRIMP, 1960

STATE AND NUMBER OF PLANTS	STANDARD CASES	VALUE	CAN CONTENTS AND CASE SIZE	ACTUAL CASES	VALUE
ATLANTIC AND GULF STATES:			ATLANTIC AND GULF STATES:		
GEORGIA (1), ALABAMA (1), AND TEXAS (2)	65,775	$1,139,369	3-OUNCES (48 CANS)	26,364	$320,008
MISSISSIPPI (12)	232,844	4,781,318	4-1/2 OUNCES (24 CANS)	1,276,209	11,011,730
LOUISIANA (18)	573,358	10,071,609	5-OUNCES (24 CANS)	603,404	4,972,095
TOTAL (34)	871,977	15,992,296	OTHER SIZES (INCLUDING ALASKA PACK) CONVERTED TO STANDARD CASES	39,156	616,391
PACIFIC STATES:					
WASHINGTON (3), OREGON (2)	27,997	462,928			
ALASKA (6)	31,000	465,000			
TOTAL (11)	58,997	927,928			
GRAND TOTAL (45)	930,974	16,920,224	TOTAL	1,945,133	16,920,224

NOTE:--"STANDARD CASES" REPRESENT THE VARIOUS SIZE CASES CONVERTED TO THE EQUIVALENT OF FORTY-EIGHT CANS TO THE CASE, EACH CAN CONTAINING 5 OUNCES.

PACK OF MISCELLANEOUS FISHERY PRODUCTS, 1960

PRODUCT	STANDARD CASES	VALUE	LOCATION AND NUMBER OF PLANTS
FISH:			
CAKES (PRINCIPALLY GROUNDFISH)	77,930	$1,068,631	MAINE (1), MASSACHUSETTS (1), NEW JERSEY (1), WASHINGTON (1)
FLAKES (PRINCIPALLY GROUNDFISH), PASTE, AND SPREAD	15,877	442,858	MAINE (2), MASSACHUSETTS (1), NEW YORK (3), MARYLAND (1), MICHIGAN (1)
GEFILTE FISH	234,937	4,396,000	NEW YORK (2), NEW JERSEY (3)
SMOKED OR KIPPERED:			
SALMON	844	62,189	WASHINGTON (7), OREGON (5), ALASKA (NOT AVAILABLE)
STURGEON, SHAD, AND SABLEFISH	405	26,944	WASHINGTON (6), OREGON (4)
TUNA SPECIALTIES (WITH NOODLES, SHERRY, BEANS, AND CREAMED SAUCE; AND SMOKED TUNA)	60,621	456,508	MAINE (1), WASHINGTON (1), OREGON (1), CALIFORNIA (3)
OTHER SPECIALTIES (ANCHOVIES, SALTED COD, CREAMED FINNAN HADDIE, THREAD HERRING, PACIFIC HERRING, ATLANTIC MACKEREL, SALMON LIVERS, WAHOO, WHITEFISH, FISH APPETIZERS, AND FISH CHOWDER)	75,510	877,938	MAINE (2), MASSACHUSETTS (2), NEW JERSEY (2), VIRGINIA (1), MICHIGAN (1), WEST COAST FLORIDA (1), WASHINGTON (1), CALIFORNIA (3), AMERICAN SAMOA (1)
TOTAL FISH	466,124	7,331,068	
SHELLFISH:			
CRAB SPECIALTIES (COCKTAIL, DEVILED, SOFT SHELL, SPREAD, SMOKED, SOUP, AND NEWBURG)	8,078	116,277	MAINE (1), NEW JERSEY (1), MARYLAND (2), SOUTH CAROLINA (1), WASHINGTON (2)
LOBSTER SPECIALTIES (MEAT, SPREAD, DIP, THERMIDOR, SOUP, AND STEWS)	7,516	236,243	MAINE (1), MASSACHUSETTS (1), CONNECTICUT (1), NEW JERSEY (3), MARYLAND (1)
SHRIMP SPECIALTIES (COCKTAIL, SOUPS, AND STEWS)	4,178	61,339	NEW JERSEY (2), MARYLAND (2), LOUISIANA (2), WASHINGTON (1)
CLAM SPECIALTIES (DIP, FRITTERS, SPREAD, SAUCE, SOUPS, AND STEWS)	36,598	507,765	MAINE (2), MASSACHUSETTS (1), CONNECTICUT (1), NEW JERSEY (1), PENNSYLVANIA (1), MARYLAND (2), WASHINGTON (2)
CONCH MEAT AND CHOWDER	6,042	130,270	NEW YORK (1), NEW JERSEY (1), DELAWARE (1), WEST COAST FLORIDA (1)
OYSTER SPECIALTIES:			
SMOKED	1,414	135,940	WASHINGTON (7), OREGON (1)
STEW	122,100	1,517,374	NEW JERSEY (1), PENNSYLVANIA (1), SOUTH CAROLINA (1), WASHINGTON (4), OREGON (1)
BISQUE AND SOUP	2,234	21,722	NEW JERSEY (1), MARYLAND (1), WASHINGTON (1)
SQUID	15,637	73,638	NEW YORK (1), NEW JERSEY (1), CALIFORNIA (1)
TERRAPIN AND TURTLES (MEAT, CHOWDER, SOUP, AND STEW)	13,455	237,526	NEW JERSEY (1), PENNSYLVANIA (1), OHIO (1), WEST COAST FLORIDA (1), LOUISIANA (2)
OTHER SPECIALTIES (CRAWFISH, BISQUE, SEA MUSSELS, ABALONE TRIMMINGS, SCALLOPS IN SAUCE, GUMBO, AND BOUILLABAISE)	1,676	38,845	MAINE (1), NEW JERSEY (1), PENNSYLVANIA (1), LOUISIANA (2), CALIFORNIA (1)
TOTAL SHELLFISH	218,928	3,076,939	
GRAND TOTAL	685,052	10,408,007	

PLANTS PRODUCING FISHERY PRODUCTS AND BYPRODUCTS, 1960

	CANNED PRODUCTS	BYPRODUCTS	TOTAL PLANTS, EXCLUSIVE OF DUPLICATION
	NUMBER	NUMBER	NUMBER
NEW ENGLAND:			
MAINE	41	15	52
MASSACHUSETTS	9	6	13
CONNECTICUT	1	1	2
RHODE ISLAND	1	1	2
TOTAL	52	23	69
MIDDLE ATLANTIC:			
NEW YORK	10	4	14
NEW JERSEY	13	13	26
PENNSYLVANIA	8	2	10
DELAWARE	1	3	4
TOTAL	32	22	54
CHESAPEAKE BAY:			
MARYLAND	4	10	13
VIRGINIA	9	20	25
TOTAL	13	30	38
SOUTH ATLANTIC AND GULF:			
NORTH CAROLINA	6	18	20
SOUTH CAROLINA	3	-	3
GEORGIA	1	1	2
FLORIDA	1	4	5
ALABAMA	2	1	3
MISSISSIPPI	15	5	19
LOUISIANA	28	9	35
TEXAS	3	5	8
TOTAL	59	43	95
GREAT LAKES AND MISSISSIPPI RIVER:			
ILLINOIS	1	1	2
IOWA	-	6	6
MICHIGAN	2	-	2
MISSOURI	-	1	1
OHIO	1	-	1
WISCONSIN	1	-	1
TOTAL	5	8	13
PACIFIC COAST:			
ALASKA	86	4	90
WASHINGTON	65	12	77
OREGON	18	4	19
CALIFORNIA	30	28	41
TOTAL	199	48	227
HAWAII	1	1	1
AMERICAN SAMOA	1	1	1
PUERTO RICO	2	1	2
GRAND TOTAL	364	177	500

NUMBER OF PLANTS PRODUCING FISHERY BYPRODUCTS, 1960

PRODUCT	ATLANTIC AND GULF COASTS 1/	PACIFIC COAST AND TERRITORIES 2/	TOTAL
	NUMBER	NUMBER	NUMBER
MEAL AND SCRAP, DRIED:			
ANCHOVY	-	1	1
ALEWIFE	3	-	3
CRAB:			
BLUE	16	-	16
DUNGENESS	-	1	1
FUR SEAL	-	1	1
GROUNDFISH (INCLUDING OCEAN PERCH)	7	-	7
HERRING	6	6	12
HORSESHOE CRAB	1	-	1
MENHADEN	33	-	33
SARDINE (PACIFIC)	-	10	10
SHRIMP	4	1	5
TUNA AND MACKEREL	-	20	20
WHALE	-	2	2
UNCLASSIFIED	17	9	26
OIL, BODY:			
ANCHOVY	-	1	1
ALEWIFE	4	-	4
FUR SEAL	-	1	1
GROUNDFISH (INCLUDING OCEAN PERCH)	7	-	7
HERRING	4	5	9
MENHADEN	34	-	34
SARDINE (PACIFIC)	-	10	10
SALMON:			
EDIBLE	-	2	2
INDUSTRIAL	-	1	1
TUNA AND MACKEREL	-	15	15
WHALE	-	2	2
UNCLASSIFIED	1	8	9
OIL, LIVER AND VISCERA:			
SHARK	1	2	3
UNCLASSIFIED	1	1	2
MUSSEL-SHELL PRODUCTS (FRESH-WATER):			
BUTTONS	8	-	8
LIME AND COLORED CHIPS	2	-	2
OYSTER-SHELL PRODUCTS:			
CRUSHED SHELL FOR POULTRY FEED	9	6	15
SHELL LIME:			
BURNED	2	-	2
UNBURNED	7	5	12
MARINE PEARL-SHELL BUTTONS	14	-	14
AGAR-AGAR	-	1	1
FISH SOLUBLES AND HOMOGENIZED-CONDENSED FISH	32	10	42
GLUE	1	-	1
IRISH MOSS EXTRACTIVES	4	-	4
KELP PRODUCTS	1	2	3
LIQUID FERTILIZER	-	2	2
PEARL ESSENCE	5	-	5
TOTAL, EXCLUSIVE OF DUPLICATION	126	51	177

1/ INCLUDES FIRMS IN THE GREAT LAKES AND MISSISSIPPI RIVER.

2/ INCLUDES HAWAII, AMERICAN SAMOA, AND PUERTO RICO.

NOTE:--LISTS OF CANNERS AND MANUFACTURERS OF FISHERY BYPRODUCTS BY INDIVIDUAL COMMODITIES MAY BE OBTAINED FROM THE U.S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D.C.

PRODUCTION OF MARINE-ANIMAL SCRAP AND MEAL, 1960

PRODUCT	ATLANTIC AND GULF COASTS		PACIFIC COAST AND TERRITORIES		TOTAL	
	TONS	VALUE	TONS	VALUE	TONS	VALUE
DRIED SCRAP AND MEAL:						
ALEWIFE	1,092	$96,600	-	-	1,092	$96,600
CRAB	1/8,487	343,013	(1)	(1)	8,487	343,013
FUR SEAL	-	-	167	$8,520	167	8,520
HERRING	2,915	229,468	6,204	681,668	9,119	911,136
MENHADEN	218,423	19,201,716	-	-	218,423	19,201,716
SARDINE, PACIFIC	-	-	3,301	298,143	3,301	298,143
SHRIMP	1/170	9,674	(1)	(1)	170	9,674
TUNA AND MACKEREL	-	-	26,325	2,303,478	26,325	2,303,478
WHALE	-	-	1,486	142,184	1,486	142,184
UNCLASSIFIED	2/16,860	1,598,158	3/4,286	418,778	21,146	2,016,936
TOTAL	247,947	21,478,629	41,769	3,852,771	289,716	25,331,400

1/ A SMALL WEST COAST PRODUCTION IS INCLUDED WITH THE EAST COAST PRODUCTION.
2/ INCLUDES THE PRODUCTION OF MEAL AND SCRAP FROM GROUNDFISH, OCEAN PERCH, AND HORSESHOE CRAB.
3/ INCLUDES THE PRODUCTION OF MEAL AND SCRAP FROM ANCHOVIES AND BOTTOMFISH.

PRODUCTION OF MARINE-ANIMAL OIL, 1960

PRODUCT	ATLANTIC AND GULF COASTS		PACIFIC COAST AND TERRITORIES		TOTAL	
	GALLONS	VALUE	GALLONS	VALUE	GALLONS	VALUE
BODY OIL:						
ALEWIFE	66,121	$31,702	-	-	66,121	$31,702
FUR SEAL	-	-	22,045	$5,638	22,045	5,638
HERRING	132,973	37,779	1,400,052	592,168	1,533,025	629,947
MENHADEN	24,453,736	11,582,027	-	-	24,453,736	11,582,027
SARDINE, PACIFIC	-	-	143,654	69,747	143,654	69,747
SALMON	-	-	9,075	19,985	9,075	19,985
TUNA AND MACKEREL	-	-	507,180	174,029	507,180	174,029
WHALE (INCLUDES SPERM)	-	-	437,137	174,641	437,137	174,641
UNCLASSIFIED	1/461,148	232,862	2/193,070	65,403	654,218	298,265
TOTAL	25,113,978	11,884,370	2,712,213	1,101,611	27,826,191	12,985,981
LIVER AND VISCERA OIL:						
SHARK	(3)	(3)	3/30,474	339,704	30,474	339,704
UNCLASSIFIED	(3)	(3)	3/2,233	10,109	2,233	10,109
TOTAL	(3)	(3)	3/32,707	349,813	32,707	349,813
GRAND TOTAL	25,113,978	11,884,370	2,744,920	1,451,424	27,858,898	13,335,794

1/ INCLUDES GROUNDFISH AND OCEAN PERCH OILS.
2/ INCLUDES ANCHOVY AND BOTTOMFISH OILS.
3/ EAST COAST PRODUCTION INCLUDED WITH WEST COAST PRODUCTION.

PRODUCTION OF FISH SOLUBLES AND HOMOGENIZED-CONDENSED FISH, 1960

PRODUCT, STATE, AND NUMBER OF PLANTS	TONS	VALUE
FISH SOLUBLES:		
MAINE (2), MASSACHUSETTS (2)	2,979	$119,487
NEW YORK (1), NEW JERSEY (3), AND DELAWARE (2)	16,483	570,470
VIRGINIA (5)	16,047	536,400
NORTH CAROLINA (4), FLORIDA (1)	6,998	224,036
MISSISSIPPI (3)	8,420	336,820
LOUISIANA (5), TEXAS (2)	17,716	620,051
OREGON (1), CALIFORNIA (8), AND HAWAII (1)	20,734	945,158
TOTAL (40)	89,377	3,352,422
HOMOGENIZED-CONDENSED FISH:		
MASSACHUSETTS (1), RHODE ISLAND (1)	9,552	668,570
GRAND TOTAL (42)	98,929	4,020,992

NOTE:--INCLUDES MENHADEN SOLUBLES.

MENHADEN USED FOR REDUCTION, BY STATES, 1960

STATE	MENHADEN UTILIZED	
	POUNDS	NUMBER OF FISH
MASSACHUSETTS, RHODE ISLAND, NEW YORK, NEW JERSEY, AND DELAWARE	713,600,250	1,065,075,000
VIRGINIA	229,513,860	342,558,000
NORTH CAROLINA	190,998,910	285,073,000
FLORIDA AND TEXAS	176,171,140	262,942,000
MISSISSIPPI	218,643,780	326,334,000
LOUISIANA	470,108,180	701,654,000
TOTAL	1,999,036,120	2,983,636,000

NOTE:--INCLUDES SMALL QUANTITIES OF OTHER SPECIES.

PRODUCTION OF MENHADEN PRODUCTS, 1960

STATE AND NUMBER OF PLANTS	DRY SCRAP AND MEAL		OIL		SOLUBLES		TOTAL
	TONS	VALUE	GALLONS	VALUE	TONS	VALUE	VALUE
MASSACHUSETTS (1), RHODE ISLAND (1), NEW YORK (1), NEW JERSEY (3), AND DELAWARE (2)	83,858	$7,277,462	7,808,798	$3,595,831	17,258	$601,502	$11,474,795
VIRGINIA (5)	24,516	2,160,600	1,014,045	490,000	15,458	516,800	3,167,400
NORTH CAROLINA (8)	21,165	1,728,904	2,995,402	1,359,350	6,788	216,688	3,304,942
FLORIDA (2) AND TEXAS (3)	18,737	1,722,077	2,255,714	1,061,861	3,563	124,708	2,908,646
MISSISSIPPI (3)	21,037	1,893,340	2,860,400	1,432,600	8,420	336,820	3,662,760
LOUISIANA (5)	49,110	4,419,333	7,519,377	3,642,385	14,363	502,691	8,564,409
TOTAL (34)	218,423	19,201,716	24,453,736	11,582,027	65,850	2,299,209	33,082,952

NOTE:--INCLUDES SMALL QUANTITIES OF OTHER SPECIES.

PRODUCTION OF OYSTER-SHELL PRODUCTS, 1960

("LIVE" OR REEF SHELLS)

STATE AND NUMBER OF PLANTS	POULTRY GRIT		LIME, BURNED AND UNBURNED		TOTAL	
	TONS	VALUE	TONS	VALUE	TONS	VALUE
NEW JERSEY (1), PENNSYLVANIA (1), MARYLAND (2), AND VIRGINIA (3)	64,808	$1,204,507	27,633	$188,577	92,441	$1,393,084
FLORIDA (1), ALABAMA (1), AND TEXAS (2)	327,667	4,932,611	30,978	221,261	358,645	5,153,872
WASHINGTON (3), OREGON (1), AND CALIFORNIA (2)	17,297	248,672	1,354	15,195	18,651	263,867
TOTAL (17)	409,772	6,385,790	59,965	425,033	469,737	6,810,823

NOTE:--A QUANTITY OF BURNED LIME WAS PRODUCED IN VIRGINIA.

PRODUCTION OF FRESH-WATER MUSSEL-SHELL BUTTONS, 1960

STATE AND NUMBER OF PLANTS	BUTTONS	
	GROSS	VALUE
IOWA (5), MISSOURI (1), NEW YORK (1) AND NEW JERSEY (1)	523,091	$577,221

NOTE:--VALUE OF PRODUCTION OF MUSSEL-SHELL LIME, DUST, AND COLORED CHIPS IS INCLUDED WITH MISCELLANEOUS BYPRODUCTS.

PRODUCTION OF MARINE PEARL-SHELL BUTTONS, 1960

STATE AND NUMBER OF PLANTS	GROSS	VALUE
CONNECTICUT (1), NEW YORK (2)	651,742	$1,094,490
NEW JERSEY (7)	439,635	1,129,523
PENNSYLVANIA (1), DELAWARE (1), AND MARYLAND (2)	334,992	451,915
TOTAL (14)	1,426,369	2,675,928

PRODUCTION OF MISCELLANEOUS BYPRODUCTS, 1960

PRODUCT	STATE AND NUMBER OF PLANTS	TOTAL VALUE
AGAR-AGAR	CALIFORNIA (1)	
GLUE	MASSACHUSETTS (1)	
IRISH MOSS EXTRACT	MAINE (2), MASSACHUSETTS (1), AND NEW JERSEY (1)	
KELP PRODUCTS	CALIFORNIA (2), MAINE (1)	$13,807,292
LIQUID FERTILIZER	WASHINGTON (1), OREGON (1)	
FRESH-WATER MUSSEL-SHELL LIME, DUST AND COLORED CHIPS	ILLINOIS (1), IOWA (1)	
PEARL ESSENCE	MAINE (4), VIRGINIA (1)	

PACK OF CANNED FISHERY PRODUCTS; STANDARD CASES - 1921 - 1960

YEAR	SALMON					
	WASHINGTON, OREGON AND CALIFORNIA		ALASKA		TOTAL SALMON	
	CASES	VALUE	CASES	VALUE	CASES	VALUE
1921-1930 AVE.	1,147,835	$11,916,541	4,860,058	$33,893,502	6,007,893	$45,810,043
1931-1940 AVE.	807,381	6,984,885	6,074,564	33,442,079	6,881,945	40,426,964
1941	899,589	11,199,317	6,932,040	56,217,601	7,831,629	67,416,918
1942	759,032	13,673,968	5,075,974	48,300,209	5,835,006	61,974,177
1943	275,889	5,110,847	5,428,318	57,824,267	5,704,207	62,935,114
1944	245,588	5,187,136	4,893,059	51,196,140	5,138,647	56,383,276
1945	557,769	7,942,102	4,350,471	44,644,303	4,908,240	52,586,405
1946	560,289	17,003,459	3,949,878	53,157,194	4,510,167	70,160,653
1947	1,329,226	31,969,134	4,312,172	88,666,301	5,641,398	120,635,435
1948	810,075	24,008,466	4,014,891	96,528,730	4,824,966	120,537,196
1949	1,133,325	22,167,812	4,391,601	81,263,171	5,524,926	103,430,983
1950	1,001,819	27,187,060	3,307,985	82,354,118	4,309,804	109,541,178
1951	1,161,274	29,388,514	3,484,299	79,237,355	4,645,573	108,625,869
1952	890,156	21,906,773	3,574,191	76,357,016	4,464,347	98,263,789
1953	1,049,547	24,067,839	2,862,312	58,172,629	3,911,859	82,240,468
1954	1,068,266	28,915,972	3,094,452	63,339,170	4,162,718	92,255,142
1955	903,816	24,507,762	2,384,820	56,848,555	3,288,636	81,356,317
1956	482,304	16,523,868	3,022,906	78,577,457	3,505,210	95,101,325
1957	743,003	23,245,194	2,463,599	62,904,280	3,206,602	86,149,474
1958	760,663	26,712,763	2,971,297	66,108,959	3,731,960	92,821,722
1959	687,199	22,358,370	1,778,014	49,468,965	2,465,213	71,827,335
1960	263,197	11,661,978	2,648,819	73,055,345	2,912,016	84,717,323

YEAR	TUNA		TUNALIKE FISHES		MACKEREL	
	CASES	VALUE	CASES	VALUE	CASES	VALUE
1921-1930 AVE.	1,017,364	$7,135,011	45,874	$236,069	1/ 229,293	1/ $979,927
1931-1940 AVE.	2,336,038	12,989,132	139,446	604,078	938,791	2,639,174
1941	2,556,922	17,605,146	374,659	1,792,741	935,001	3,503,718
1942	2,404,908	30,008,885	79,841	733,608	721,189	3,693,082
1943	2,579,815	30,541,893	116,258	888,296	937,251	5,271,203
1944	3,530,877	40,615,221	29,143	220,896	1,225,060	7,033,997
1945	4,442,101	46,713,477	89,464	693,974	692,748	4,046,691
1946	4,596,629	57,342,706	187,855	1,793,117	962,150	7,575,291
1947	5,447,554	85,093,328	446,941	5,515,847	1,754,950	15,018,633
1948	6,663,619	107,980,968	374,139	4,631,328	1,281,192	9,850,834
1949	7,130,453	96,039,797	159,867	1,670,528	1,049,927	6,848,930
1950	8,944,598	112,136,363	71,943	693,731	1,457,048	7,491,816
1951	8,131,274	98,102,229	105,451	943,977	1,048,518	6,259,224
1952	8,893,889	111,075,890	227,000	1,958,620	1,525,353	11,362,697
1953	9,407,059	124,744,195	172,967	1,513,413	596,321	5,038,512
1954	10,819,849	141,504,299	78,049	644,517	366,181	2,508,715
1955	9,933,580	125,222,513	4,815	36,551	564,429	3,333,979
1956	11,827,156	140,287,093	6,859	51,249	1,116,343	6,434,860
1957	11,891,011	135,812,882	12,079	94,021	1,326,584	7,403,682
1958	14,094,101	161,793,000	111,371	821,919	404,425	2,657,012
1959	14,331,713	159,142,613	57,505	382,932	586,818	4,234,735
1960	15,305,434	172,678,873	14,423	106,859	934,746	5,803,965

YEAR	SARDINES				ANCHOVIES		ALEWIVES	
	MAINE		PACIFIC					
	CASES	VALUE	CASES	VALUE	CASES	VALUE	CASES	VALUE
1921-1930 AVE.	1,677,265	$6,031,760	1,953,474	$6,961,598	-	-	24,066	$77,558
1931-1940 AVE.	1,273,653	3,878,988	2,234,156	6,412,298	4/ 1,594	$4,982	27,986	73,056
1941	3,164,787	12,590,958	5,007,154	18,091,873	-	-	42,156	153,269
1942	2,873,246	12,162,451	3,744,624	15,509,964	262	6,493	77,232	399,555
1943	2,505,114	11,104,570	3,354,697	14,352,359	35	1,196	112,472	619,213
1944	3,261,984	14,819,803	3,650,919	15,225,919	-	-	135,995	793,254
1945	2,725,216	12,077,201	3,765,981	15,346,472	-	-	131,062	753,769
1946	3,276,338	20,275,590	2,977,170	19,895,649	-	-	193,980	1,180,197
1947	3,013,910	28,310,674	1,652,592	16,538,375	199,863	1,377,275	139,816	779,150
1948	3,682,392	29,359,114	2,654,149	21,892,893	102,903	755,458	123,134	639,356
1949	3,074,523	21,051,675	3,768,212	21,334,825	5,771	34,184	111,994	469,398
1950	3,844,164	21,209,033	5,070,805	26,345,609	38,096	227,496	69,568	316,993
1951	1,676,764	14,635,352	2,864,984	19,362,744	63,060	489,062	127,760	604,314
1952	3,530,876	21,502,970	106,746	918,072	674,286	4,737,391	79,861	374,680
1953	2,782,495	16,954,119	63,612	653,131	1,061,995	7,661,173	111,391	507,925
1954	2,934,933	18,152,815	1,338,101	9,817,893	505,972	2,772,701	65,716	290,550
1955	1,268,843	9,333,350	1,414,609	10,013,590	415,149	2,430,732	44,645	206,004
1956	2,231,441	16,692,008	754,734	5,734,498	612,302	3,360,586	40,805	164,940
1957	2,217,688	14,733,259	497,756	4,720,656	440,247	2,344,319	30,562	131,019
1958	2,099,959	15,873,963	2,222,586	16,497,157	53,735	308,848	51,182	231,339
1959	1,753,145	14,902,142	754,571	5,399,228	4,275	29,444	72,893	340,459
1960	1,997,618	16,699,987	615,865	4,658,747	(5)	(5)	41,891	194,524

SEE FOOTNOTES AT END OF TABLE.

PACK OF CANNED FISHERY PRODUCTS: STANDARD CASES - 1921 - 1960 - CONTINUED

YEAR	FISH ROE, CAVIAR, AND EGGS FOR BAIT		ANIMAL FOOD		CRABMEAT	
	CASES	VALUE	CASES	VALUE	CASES	VALUE
1921-1930 AVE.	2/68,740	2/$820,057	3/13,495	3/ $42,451	1/ 2,870	$53,908
1931-1940 AVE.	55,807	873,544	350,706	858,850	20,870	177,540
1941	76,740	815,514	1,009,515	2,624,487	60,198	547,617
1942	53,190	910,890	104,954	374,718	114,548	1,755,065
1943	59,884	1,044,582	1,771	5,319	75,308	1,194,483
1944	55,677	824,197	-	-	86,942	1,361,458
1945	36,795	948,042	-	-	55,514	883,767
1946	58,192	1,905,638	-	-	199,078	4,720,119
1947	52,432	1,641,228	909,999	3,949,699	139,818	2,705,391
1948	50,629	1,473,320	1,323,808	6,971,003	220,802	4,846,494
1949	86,459	1,969,998	1,931,757	8,663,442	161,829	3,490,885
1950	71,557	1,908,559	2,721,463	13,871,430	137,203	3,121,269
1951	76,095	1,926,140	2,341,871	11,675,809	149,945	3,586,558
1952	64,080	1,681,010	3,497,733	15,667,950	86,058	2,087,019
1953	65,742	1,812,844	3,881,245	17,348,052	114,886	2,898,016
1954	61,147	1,874,937	4,027,368	18,419,757	154,522	3,699,293
1955	58,218	1,910,580	5,337,449	27,517,188	99,180	2,190,664
1956	63,053	1,957,045	6,688,039	32,715,455	124,667	2,720,848
1957	63,314	2,453,769	7,223,382	34,152,747	154,514	3,104,606
1958	64,020	2,695,580	7,503,248	41,959,061	143,809	3,070,355
1959	70,800	2,648,269	7,210,467	37,077,034	150,890	3,548,677
1960	65,923	2,707,277	8,783,271	43,961,003	204,651	5,144,785

YEAR	CLAM PRODUCTS					
	WHOLE AND MINCED		CHOWDER, JUICE, BROTH, ETC.		TOTAL	
	CASES	VALUE	CASES	VALUE	CASES	VALUE
1921-1930 AVE.	1/204,408	1/$1,341,341	1/304,481	1/$777,956	1/508,889	1/$2,119,297
1931-1940 AVE.	219,224	1,158,301	457,584	1,638,753	676,808	2,797,054
1941	169,955	891,209	757,388	2,819,820	927,343	3,711,029
1942	143,118	1,142,486	639,484	2,648,572	782,602	3,791,058
1943	116,430	1,091,489	348,364	1,710,931	464,794	2,802,420
1944	184,655	2,026,812	363,041	1,793,800	547,696	3,820,612
1945	366,603	4,430,988	533,429	2,960,110	900,032	7,391,098
1946	356,019	4,311,259	1,171,770	6,833,788	1,527,789	11,145,047
1947	106,226	1,346,289	1,151,424	7,295,946	1,257,650	8,642,235
1948	173,194	2,029,484	1,006,580	6,300,155	1,179,774	8,329,639
1949	297,977	3,203,325	888,083	5,575,693	1,186,060	8,779,018
1950	446,725	4,381,938	1,072,225	6,457,951	1,518,950	10,839,889
1951	390,747	4,674,252	1,110,861	7,099,657	1,501,608	11,773,909
1952	381,181	3,787,773	1,317,810	8,421,785	1,698,991	12,209,558
1953	314,002	3,892,749	1,331,333	8,737,054	1,645,335	12,629,803
1954	408,336	4,534,708	1,229,327	7,766,325	1,637,663	12,301,033
1955	458,182	4,332,274	1,259,144	7,725,052	1,717,326	12,057,326
1956	511,977	5,094,064	1,346,020	8,387,068	1,857,997	13,481,132
1957	653,522	5,118,046	1,294,981	8,198,608	1,948,503	13,316,654
1958	635,047	4,601,773	1,256,212	7,948,856	1,891,259	12,550,629
1959	779,531	5,422,013	1,182,495	7,868,815	1,962,026	13,290,828
1960	741,246	5,074,515	1,316,225	8,567,359	2,057,471	13,641,874

YEAR	OYSTERS		SHRIMP		OTHER FISH AND SHELLFISH	TOTAL
	CASES	VALUE	CASES	VALUE	VALUE	VALUE
1921-1930 AVE.	520,205	$2,524,660	826,158	$4,475,680	1/$1,737,777	$77,965,913
1931-1940 AVE.	527,204	1,886,926	1,122,350	4,557,298	1,373,894	79,551,288
1941	657,045	2,997,114	884,874	4,882,544	1,951,229	138,684,157
1942	523,262	3,598,703	963,352	7,347,330	2,730,968	144,996,947
1943	345,868	2,821,556	660,436	5,360,647	2,245,941	141,188,792
1944	273,556	2,283,429	561,649	4,854,799	4,677,376	152,914,237
1945	225,964	2,029,953	214,971	1,918,633	7,411,089	152,800,571
1946	390,835	5,249,272	522,130	8,428,735	17,957,441	227,629,455
1947	410,487	4,259,485	472,366	8,192,004	8,020,161	310,678,920
1948	357,080	4,777,531	558,870	7,791,313	6,345,032	336,181,479
1949	452,918	6,525,207	664,721	11,203,325	3,991,710	295,503,905
1950	492,390	7,096,235	786,251	12,773,346	3,762,400	331,335,347
1951	466,334	5,931,276	871,171	12,187,049	5,106,783	301,210,295
1952	529,143	7,047,441	817,910	12,998,814	3,943,297	305,829,198
1953	488,908	6,559,309	1,016,116	18,946,622	7,366,092	306,873,674
1954	446,084	5,829,378	934,721	13,691,253	7,255,583	331,017,866
1955	559,602	7,003,967	901,038	13,562,310	6,990,290	303,165,361
1956	465,138	6,256,581	909,062	16,421,433	8,136,821	349,515,874
1957	498,676	7,008,471	608,001	13,135,880	11,267,620	335,829,059
1958	398,551	5,444,713	953,879	20,790,602	11,066,256	388,582,156
1959	421,117	5,720,918	922,150	16,948,470	12,758,011	348,231,095
1960	410,521	5,640,280	930,974	16,920,224	10,445,469	383,321,190

1/ REPRESENTS 5-YEAR AVERAGE, 1926-1930. 2/ REPRESENTS 4-YEAR AVERAGE, 1927-1930. 3/ REPRESENTS 3-YEAR AVERAGE, 1928-1930. 4/ REPRESENTS 1933 PRODUCTION. 5/ INCLUDED WITH "OTHER FISH AND SHELLFISH".

PRODUCTION OF FISHERY BYPRODUCTS, 1921 - 1960

YEAR	MENHADEN DRIED SCRAP AND MEAL		MENHADEN ACIDULATED SCRAP		HERRING MEAL	
	TONS	VALUE	TONS	VALUE	TONS	VALUE
1921-1930 AVE.	34,109	$1,587,175	28,374	$678,844	(1)	(1)
1931-1940 AVE.	38,412	1,389,592	18,530	322,304	14,560	$482,530
1941	75,316	4,008,355	11,029	242,792	12,520	847,116
1942	50,504	3,362,279	2,594	80,520	5,591	386,059
1943	66,357	4,766,672	1,555	58,821	9,170	690,280
1944	69,170	4,913,224	2,922	111,104	14,212	1,044,861
1945	77,451	5,483,377	1,557	62,200	14,344	1,120,042
1946	94,622	8,605,118	2,022	78,475	19,505	2,248,942
1947	98,602	10,883,852	632	26,863	18,453	2,649,474
1948	8/104,058	8/11,560,914	(8)	(8)	17,686	2,065,042
1949	8/113,393	8/17,813,339	(8)	(8)	5,298	973,445
1950	8/103,365	8/12,864,751	(8)	(8)	17,797	2,138,776
1951	8/115,464	8/13,879,523	(8)	(8)	9,631	1,370,083
1952	8/144,025	8/17,847,361	(8)	(8)	9,864	1,314,361
1953	174,752	21,767,205	-	-	5,206	717,472
1954	183,091	23,783,364	-	-	6,973	928,862
1955	190,628	25,457,512	-	-	7,671	1,163,464
1956	210,582	27,439,634	-	-	11,298	1,562,622
1957	172,388	21,725,888	-	-	13,891	1,861,961
1958	158,074	20,698,929	-	-	10,277	1,457,982
1959	223,893	26,391,987	-	-	11,963	1,589,237
1960	218,423	19,201,716	-	-	9,119	911,136

YEAR	SARDINE (PACIFIC) MEAL		TUNA AND MACKEREL MEAL		OTHER MEAL, DRIED AND GREEN SCRAP	
	TONS	VALUE	TONS	VALUE	TONS	VALUE
1921-1930 AVE.	2/22,726	2/$1,241,001	2/ 3,047	2/$151,334	34,163	$1,638,101
1931-1940 AVE.	74,548	2,608,768	7/10,592	7/ 343,088	25,682	943,958
1941	97,979	5,942,272	8,693	484,886	31,307	1,570,152
1942	71,828	5,310,037	7,144	465,481	33,419	2,021,383
1943	75,611	5,775,932	7,766	505,199	29,944	1,832,248
1944	86,196	6,582,600	9,648	644,458	30,999	1,946,775
1945	60,860	4,643,694	10,273	705,976	36,190	2,390,049
1946	36,899	5,233,075	13,584	1,743,189	32,989	2,530,624
1947	16,715	2,556,038	19,761	2,998,321	32,276	3,265,803
1948	19,076	2,614,616	21,305	2,757,778	37,419	4,090,384
1949	39,278	6,219,717	19,139	3,073,742	60,072	7,571,899
1950	43,009	5,269,696	25,377	3,268,594	50,406	5,711,918
1951	17,225	2,266,968	23,147	3,021,720	44,289	4,835,603
1952	390	51,741	21,951	2,892,874	45,173	5,055,317
1953	144	18,966	20,029	2,622,631	38,720	4,433,379
1954	6,513	842,649	21,576	2,850,605	38,814	4,348,517
1955	6,966	968,908	23,396	3,120,302	35,841	4,039,282
1956	2,809	369,867	26,266	3,355,069	44,838	5,159,699
1957	1,474	183,330	25,716	3,037,436	50,616	5,783,140
1958	10,756	1,390,200	25,311	3,185,772	43,722	5,025,696
1959	2,927	323,999	25,380	2,847,204	42,388	4,773,438
1960	3,301	298,143	26,325	2,303,478	32,548	2,616,927

YEAR	TOTAL SCRAP AND MEAL		OYSTER AND MARINE CLAM-SHELL PRODUCTS		FRESH-WATER MUSSEL-SHELL PRODUCTS	MARINE PEARL-SHELL PRODUCTS
	TONS	VALUE	TONS	VALUE	VALUE	VALUE
1921-1930 AVE.	122,419	$5,296,455	308,823	$2,455,768	3/$5,575,967	4/$4,544,147
1931-1940 AVE.	182,325	6,090,241	346,095	1,565,738	3,823,276	4,122,988
1941	236,844	13,095,573	438,407	1,985,253	3,037,350	6,236,714
1942	171,080	11,625,759	466,037	2,582,261	5,064,271	5,528,421
1943	190,403	13,629,152	509,285	2,820,986	3,782,028	4,696,593
1944	213,147	15,243,022	582,215	3,134,696	4,428,903	4,134,738
1945	200,675	14,405,338	507,096	2,573,717	4,844,647	3,286,245
1946	199,621	20,439,423	390,433	2,270,853	6,629,578	5,635,904
1947	186,439	22,380,351	501,393	3,263,158	8,166,000	7,902,000
1948	199,544	23,088,734	345,075	2,474,492	5,447,121	8,587,011
1949	237,180	35,652,142	362,028	2,662,252	3,767,703	6,782,281
1950	239,954	29,253,735	399,375	2,950,053	5,064,495	9,239,018
1951	209,756	25,373,897	453,319	3,568,745	3,845,661	7,714,846
1952	221,403	27,161,654	429,348	3,359,024	4,438,545	6,905,104
1953	238,851	29,559,653	466,732	3,830,276	5,357,849	7,403,894
1954	256,967	32,753,997	482,687	4,172,518	5,896,153	6,955,096
1955	264,502	34,749,468	359,565	3,148,658	4,787,020	6,606,363
1956	295,793	37,886,891	386,200	3,943,621	4,441,702	6,127,940
1957	264,085	32,591,755	478,568	5,200,589	3,333,369	5,754,892
1958	248,140	31,758,579	431,171	4,718,786	2,424,569	4,217,522
1959	306,551	35,925,865	399,338	4,937,182	1,221,142	3,166,190
1960	289,716	25,331,400	469,737	6,810,823	9/577,221	2,675,928

SEE FOOTNOTES AT END OF TABLE.

PRODUCTION OF FISHERY BYPRODUCTS, 1921 - 1960 - CONTINUED

YEAR	MENHADEN OIL		HERRING OIL		SARDINE (PACIFIC) OIL	
	GALLONS	VALUE	GALLONS	VALUE	GALLONS	VALUE
1921-1930 AVE.	4,863,899	$1,969,152	2,063,436	$797,716	2,770,878	$1,156,437
1931-1940 AVE.	4,074,746	971,921	3,666,902	894,713	15,458,188	4,376,256
1941	6,034,050	2,829,441	3,041,315	1,563,545	18,125,147	9,879,290
1942	5,128,760	3,200,129	985,403	646,565	12,508,958	8,067,750
1943	5,734,668	3,892,142	1,727,441	1,129,446	13,947,295	9,301,593
1944	6,067,111	3,725,498	2,389,287	1,603,078	18,098,982	11,722,950
1945	8,335,094	5,656,550	2,663,546	1,786,040	11,852,994	7,926,147
1946	9,758,648	9,033,032	3,532,454	4,292,776	4,866,567	6,843,376
1947	8,473,371	11,425,497	3,875,025	4,144,643	2,103,965	2,677,453
1948	8,763,939	10,132,179	3,643,537	4,004,250	2,328,572	2,457,858
1949	8,293,911	3,407,510	723,350	394,297	6,123,140	2,872,532
1950	10,209,958	5,866,554	3,309,457	2,366,005	6,188,607	4,693,550
1951	12,537,115	9,771,154	1,512,814	1,205,384	1,942,586	1,545,937
1952	12,888,646	5,785,395	1,081,963	517,538	20,881	10,815
1953	17,824,477	8,806,317	718,632	360,533	13,128	6,402
1954	18,641,433	9,755,320	760,927	434,347	755,843	420,531
1955	21,232,141	12,195,454	1,091,016	668,681	897,711	521,566
1956	22,428,082	14,092,275	1,824,156	1,141,911	337,351	180,544
1957	15,797,919	9,466,198	1,880,733	1,138,978	87,495	54,615
1958	17,064,818	9,434,108	1,760,440	882,119	740,806	426,695
1959	20,628,278	10,743,781	2,000,548	988,994	187,938	91,691
1960	24,453,736	11,582,027	1,533,025	629,947	143,654	69,747

YEAR	TUNA AND MACKEREL OIL		WHALE AND SPERM OIL		LIVER OIL	
	GALLONS	VALUE	GALLONS	VALUE	GALLONS	VALUE
1921-1931 AVE.	2/ 45,354	2/$13,933	1,403,568	$678,544	(5)	(5)
1931-1935 AVE.	1/ 252,982	3/ 65,054	3,111,112	1,203,892	322,122	$2,169,932
1941	250,517	100,048	34,058	15,907	1,233,242	14,871,588
1942	214,932	112,042	47,247	31,733	1,000,912	10,034,907
1943	219,044	131,906	37,964	30,406	851,854	14,841,970
1944	317,236	177,774	7,185	5,135	998,802	13,237,435
1945	304,143	173,452	-	-	804,288	11,202,207
1946	359,437	395,475	-	-	895,884	13,478,590
1947	748,017	958,998	66,374	70,007	832,510	11,643,468
1948	660,515	622,110	120,089	130,217	740,137	12,507,652
1949	597,935	265,736	74,950	52,475	834,357	9,845,455
1950	884,434	553,231	-	-	331,257	3,431,090
1951	712,620	525,552	68,500	50,200	299,575	2,579,347
1952	744,827	367,585	-	-	276,609	2,075,014
1953	659,176	314,586	-	-	204,331	1,436,627
1954	584,869	243,446	-	-	236,717	1,391,921
1955	544,937	264,225	-	-	218,897	588,739
1956	705,316	359,144	278,554	172,703	285,789	625,337
1957	738,279	397,334	436,850	214,152	152,651	542,031
1958	627,171	319,183	425,736	219,253	50,770	234,899
1959	601,010	190,938	521,329	264,906	32,873	300,503
1960	507,180	174,029	437,137	174,641	32,707	349,813

YEAR	OTHER MARINE ANIMAL OIL		TOTAL OIL		OTHER BYPRODUCTS	GRAND TOTAL
	GALLONS	VALUE	GALLONS	VALUE	VALUE	VALUE
1921-1930 AVE.	5/ 459,292	5/$222,121	11,606,427	$4,837,903	$1,001,606	6/$17,948,654
1931-1940 AVE.	307,492	123,694	27,193,544	9,805,461	1,265,027	26,555,905
1941	565,298	334,395	29,283,627	29,594,214	2,851,970	56,801,074
1942	692,892	486,476	20,579,104	22,579,602	3,516,548	50,896,862
1943	597,950	485,391	23,116,216	29,812,854	4,394,653	59,136,266
1944	444,372	536,911	28,322,975	31,008,781	5,348,413	63,298,553
1945	541,787	491,326	24,501,852	27,235,722	5,864,937	58,210,606
1946	618,020	658,883	20,031,010	34,702,132	6,964,960	76,642,850
1947	633,630	830,596	16,732,892	31,750,662	7,130,156	80,592,327
1948	826,822	1,128,541	17,083,611	30,982,807	9,285,458	79,865,623
1949	1,048,190	526,972	17,695,833	17,364,977	12,243,140	78,472,495
1950	840,136	562,279	21,763,849	17,472,709	13,208,356	77,188,366
1951	1,099,099	946,069	18,172,309	16,623,643	12,186,235	69,313,027
1952	1,081,483	635,021	16,094,409	9,391,368	16,735,936	67,991,631
1953	874,374	557,441	20,294,118	11,481,906	16,738,418	74,371,996
1954	884,944	559,879	21,864,733	12,805,444	19,843,928	82,427,136
1955	913,158	629,949	24,897,860	14,868,614	19,175,279	83,335,402
1956	1,007,415	679,758	26,866,663	17,251,672	22,085,015	91,736,841
1957	1,254,726	805,921	20,348,653	12,619,229	21,881,134	81,380,968
1958	1,358,252	816,933	22,027,993	12,333,190	24,430,403	79,883,049
1959	1,005,879	511,163	24,977,855	13,091,976	23,873,171	82,215,526
1960	751,459	355,590	27,858,898	13,335,794	17,828,284	66,559,450

1/ INCLUDED WITH "OTHER MEAL, DRIED AND GREEN SCRAP." 2/ REPRESENTS 5-YEAR AVERAGE 1926-1930. 3/ REPRESENTS AVERAGE FOR 1929 AND 1930. 4/ REPRESENTS VALUE OF PRODUCTION FOR 1930 ONLY. 5/ THE PRODUCTION OF LIVER OIL HAS BEEN INCLUDED WITH "OTHER MARINE ANIMAL OIL." 6/ VALUE OF MUSSEL-SHELL AND PEARL-SHELL PRODUCTS IS NOT INCLUDED, 1921-1925. 7/ REPRESENTS AVERAGE FOR 1932-1940. 8/ A SMALL PRODUCTION OF ACIDULATED SCRAP IS INCLUDED WITH MENHADEN DRIED SCRAP AND MEAL. 9/ VALUE OF BUTTONS.